

Industrial Pretreatment Quarterly

Published for Industrial Dischargers by the King County Industrial Waste Program (KCIW)



King County

Wastewater Treatment Division
Industrial Waste Program

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Mission Statement

The mission of the Industrial Waste Program is to protect the environment, public health, biosolids quality, and King County's regional sewerage system. We work cooperatively with our customers as we regulate industrial discharges, provide technical assistance, and monitor the regional sewerage system.

Industrial Waste Advisory Committee

Christopher Anfman, Skills, Inc.
Kevin Burrell,
Environmental Coalition of South
Seattle (ECOSS)
Ken Gross, GM Nameplate
Sandy Hallberg, Asko Processing
Donna Hoskins, Berlex Laboratories
Bill Hughes, Skills, Inc.
Larry Petersen, Mikron Industries
Al Rainsberger, Todd Pacific
Steve Skodje, Cargill, Inc.
Heather Trim, People for Puget Sound
Doris Turner, Boeing Commercial
Airplane Group - Renton
Chris VanHoof, City of Kent
Scott Woerman, North Creek Analytical

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KCIW facts and figures for 2005

Protecting water quality is a sound business investment. The King County Industrial Waste Program (KCIW) thanks King County industry and other facilities for working with our program to manage their waste throughout 2005.

In a busy year, KCIW completed 435 inspections; collected 2,279 discrete compliance samples; and identified a total of 46 discharge violations. During 2005 KCIW issued eight new permits and 37 permit renewals, with six new permits in process at the end of the year. The largest categories of permit holders were metal plating and food processing companies.

During 2005 KCIW issued 37 companies Notices of Violation for 90 violations. None of the violations identified by KCIW or by self-monitoring caused National Pollutant Discharge Elimination System (NPDES) exceptions at county treatment facilities.

KCIW commented on the U.S. Environmental Protection Agency's (EPA's) Preliminary Effluent Guidelines Program Plan for 2006. In October the EPA issued the long awaited Pretreatment Streamlining Rule. KCIW initiated an evaluation of the biotechnology industry to assess the need to develop a streamlined permitting process to assist biotechnology facilities in meeting local, state and federal discharge regulations.

The county's Dental Waste Project, inspecting 75 dental offices this year, has resulted in an approximate 50 percent reduction in the amount of mercury in King County biosolids from 2000 – 2005. In the Lower Duwamish Source Control Inspection Project KCIW investigators worked with Seattle Public Utility



Peggy Rice, KCIW compliance investigator and Rich Sklar, senior facilities engineer, at the Renton plant of the Kenworth Truck Company.

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KCIW News

Local sewer agency workshop

KCIW will be hosting a workshop for King County region local sewer agencies on April 26 at the county's West Point Treatment Plant. A key topic will be control of polar Fats, Oils, and Grease (FOG). The meeting will end with an optional treatment plant tour.

Note: this is not KCIW's workshop for area companies – that will take place in fall 2006.

KCIW will be sending further information to all local sewer agencies about the workshop. For more information, local sewer agencies should contact their KCIW compliance investigator contact, or call 206-263-3000.

Call for IWAC member! Next IWAC meeting

KCIW is seeking an individual who works for a county permitted food processing company who is interested in being a member of the Industrial Waste Advisory Committee (IWAC). The committee was formed in 2000 to exchange ideas among representatives of industrial wastewater dischargers, sewer agencies, environmental groups and KCIW staff about the program. Committee members are volunteers who represent the types of industries and agencies served by the KCIW.

For more information, or to discuss, please contact Barbara Badger at 206-263-3024 or via e-mail at barbara.badger@metrokc.gov.

The next IWAC meeting will take place May 3. For specific time and location, and other information, please telephone KCIW. The meeting site at 130 Nickerson St. is wheelchair accessible. People who have needs or disabilities for which arrangements must be made in advance should contact KCIW at 206-263-3000; use the Washington Relay Service at 711 or e-mail: kristin.painter@metrokc.gov.

Forum to explore marine environment connection with human health and the economy

A one-day Toxics in Puget Sound Forum by People for Puget Sound will focus on toxic contamination and its effects in Puget Sound, featuring current research by the top scientists and researchers. The forum will take place April 5 in Seattle. Topics will include: stormwater and air contributions; levels of contamination in the food web of Puget Sound from plankton to the orca; environmental justice considerations and economic and industry implications. King County Department of Natural Resources and Parks is one of the sponsors.

For more information go to: www.pugetsound.org or contact Heather Trim at 206-382-7007X215 or e-mail: htrim@pugetsound.org

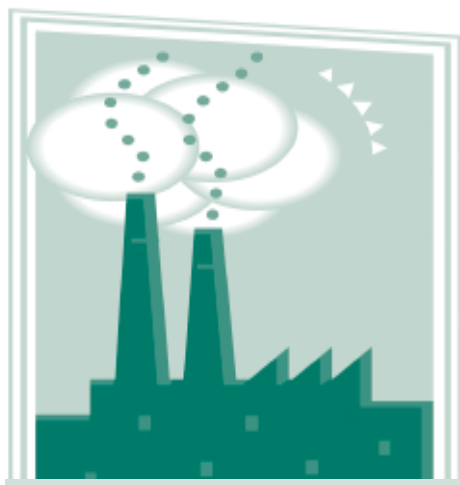
Meet an IWAC member



*Sandy Hallberg,
Askø Processing, Inc.*

KCIW is presenting as series of profiles of its IWAC members:

Sandy Hallberg is the environmental manager for ASKO Processing, Inc. He has worked for ASKO for 38 years and in the metal finishing industry 41 years. During this time he has been a plater, production manager, quality control manager and is an NDT (nondestructive testing) Level III certified inspector. Sandy says he likes going to the IWAC meetings because there is a great mix of members and their industries to learn from; thus he has received a much broader knowledge of the workings of King County and KCIW. Sandy has been married for 38 years to his wife "Sandy". He enjoys his family, including his children and grandchildren. He also enjoys cars, camping and computers.



About the *Industrial Pretreatment Quarterly*

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For more information contact Doug Hilderbrand, 206-263-3032 or e-mail: douglas.hilderbrand@metrokc.gov

Printed on recycled paper



**This material is provided
in alternative formats
upon request by calling
206-263-3000
or TTY relay: 711**

Industrial Pretreatment Tips The Material Safety Data Sheet

KCIW presents these technical assistance tips as cost-effective ways to reduce pollutants and volumes of wastewater discharged into the sewerage system, to protect public health and the environment. The following article appeared in the Winter 2005 issue of the Department of Ecology's publication Hazardous Waste Shoptalk.

Q. What is an MSDS? What can it tell me?

- A.** The Material Safety Data Sheet (MSDS) was established by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HAZCOM) as a communication link between chemical manufacturers and handlers. An MSDS supplies workers, emergency personnel, and visitors at a facility with information on the hazards associated with a chemical, the proper procedures for handling it, and quick guidance during an emergency. An MSDS must be on hand for most chemicals used or stored at a facility, though some chemicals, such as FDA-regulated compounds, do not require them.

MSDSs do not have to follow a particular format, but they must include specific information:

- Name, address, and telephone number of the manufacturer responsible for preparing the information
- Chemical and common names of hazardous chemicals, Chemical Abstracts Service (CAS) number for each chemical listed (e.g., Benzene Anhydrous, 99%; Mineral naphtha; CAS: 71-43-2)
- Hazardous Identification: Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) are both used with a scale of 0-4; the higher the number the more severe the hazard)
- Information on exposure limits from the Occupational Safety & Health Administration (OSHA) and/or the National Institute for Occupational Safety and Health (NIOSH)
- Primary routes of exposure and acute and chronic health effects posed by the hazardous substance
- Signs and symptoms of overexposure
- Carcinogen listing
- Physical and chemical characteristics of the hazardous chemical (i.e., vapor pressure, flash point)
- Proper safe handling practices and use precautions (including personal protective equipment and controls)
- Other safety precautions in the use of or exposure to the hazardous substance
- Emergency procedures for spills or fires
- First aid procedures
- Disposal procedures
- Date the material safety data sheet was updated

For information on reducing or recycling dangerous waste, ask for the toxics reduction staff, Ecology's Bellevue office, 425-649-7000 or call 711, or 800-833-6388 for TTY.



King County to receive wastewater from Seattle-Tacoma International Airport

In December 2005, King County received a permit application from the Port of Seattle (the Port) to discharge pretreated industrial wastewater from the Seattle-Tacoma International Airport's industrial wastewater treatment plant to King County's South Treatment Plant in Renton. The Port published public notice of its application on January 11, 2006. Public notice in area newspapers allows the public 30 days to comment on these projects.

The permitted waste stream originates from 297 acres of surface water runoff from the terminal gates, airline hangars and other maintenance areas where fuel and deicing fluids are likely to drip. This runoff is pretreated for removal of floating and emulsified petroleum hydrocarbons and suspended solids in a dissolved air flotation system. Water-soluble compounds such as ethylene and propylene glycol found in aircraft deicing fluids (ADF) are not removed in the dissolved air flotation process. ADF is the source of increased biological oxygen demand (BOD) in the wastewater.

Recent advances in total organic carbon (TOC)/BOD monitoring technology now allow efficient segregation of high and low BOD concentration wastewater. Online TOC/BOD analyzers will be used for continuous monitoring of BOD concentrations. Low BOD wastewater will continue to be treated in the industrial wastewater treatment plant and discharged to Puget Sound via the Midway Outfall. High BOD concentration wastewater will be

pretreated and routed to the county's South Treatment Plant for further treatment using a new pump station and force main. The Port has constructed approximately 20,400 feet of new 16-inch diameter force main that will connect with the Val Vue Sewer District.

The quantities of ADF applied will vary with weather conditions. The volumes of ADF can vary dramatically through seasons and throughout the years. The volume of surface runoff will depend on the size and duration of precipitation events. As the flow will be segregated based on BOD concentration, the quantity of discharge to King County will depend on the amount of aircraft deicing and precipitation events. The Port anticipates an average design flow of 1 million gallons per day (MGD) on days when high-strength BOD runoff is present. The peak flow rate could reach 2.3 MGD. Based on recent monitoring approximately 40 days per year of discharge is anticipated. Diverting this flow to South Treatment Plant should reduce deicing related discharges to Puget Sound by 98 percent annually.

In its most recent Effluent Guidelines Plan (2004), the EPA identified the airport industrial sector for effluent guidelines rulemaking. To support the effluent guidelines development, the

(Continued on page 5, column 1)

Discharge Screening levels for Volatile Organic Compounds: Groundwater remediation sites

KCIW is revising Discharge Screening levels for Volatile Organic Compounds this year. An article will appear in the June Pretreatment Quarterly. These screening levels (not local limits) are discharge guidelines used by KCIW on a case-by-case, compound-by-compound basis. KCIW has revised the maximum concentrations allowed in discharges for groundwater remediation sites to: Benzene - 0.07 milligrams per liter (mg/l); Ethylbenzene - 1.7 mg/l and Toluene - 1.4 mg/l.

For more information, call Bruce Tiffany, KCIW's water quality engineer, at 206-263-3011; e-mail: bruce.tiffany@metrokc.gov; or go to <http://dnr.metrokc.gov/wlr/indwaste/ground.htm>.

KCIW to conduct trial polar FOG test

KCIW presents these technical assistance tips as cost-effective ways to reduce pollutants and volumes of wastewater discharged into the sewerage system, to protect public health and the environment.

KCIW has a narrative discharge limit for fats, oils, and grease (FOG) of animal or vegetable origin (i.e., polar FOG). One important aspect of the narrative limit requires industries to minimize the amount of floatable polar FOG in their discharge. To date, the presence of floatable polar FOG in wastewater samples has been assessed by visual observation in sample containers. The difficulty with this technique is discerning whether polar FOG is present and in what quantity.

Throughout 2006, the program will implement trial testing of a new technique for measuring the amount of floatable polar FOG in wastewater discharges. The technique involves transferring the wastewater to a calibrated 1-liter volumetric flask and measuring the height of floatable polar FOG that appears in the “neck” of the volumetric flask. The program purchased and tested special volumetric flasks made of polymethylpentene for use by this technique.

For this trial period, KCIW will provide the polymethylpentene flasks to a dozen of its large food processing and grease rendering companies. These companies are being encouraged to provide feedback to the program on the “pros and cons” of this new sampling technique.

For further information, please contact KCIW staff engineer, Bruce Tiffany by e-mailing: bruce.tiffany@metrokc.gov or call 206-263-3011. To view KCIW's FOG Internet page, see page 1.

(Wastewater from Seattle-Tacoma continued from page 4)

EPA is currently collecting data on the engineering, economic and environmental aspects of airport deicing operations. The EPA intends to propose effluent guidelines for the airport industrial sector by October 2006 and take final action by September 2007.

For further information contact KCIW compliance investigator Jim Sifford, 206-263-3008 or e-mail: jim.sifford@metrokc.gov.

KCIW studies local biotechnology industry

In 2005 KCIW initiated an evaluation of the biotechnology industry to assess the need to develop a streamlined permitting process to assist biotechnology facilities in meeting local, state and federal discharge regulations. KCIW has done the following:

KCIW presented the project work plan to the H.E.L.P. Group (Health, Environmental, Safety and Laboratory Professionals), a trade group that represents these professionals employed in the biotech and research laboratory industries in the Pacific Northwest; and to MWWPAC (Metropolitan Water Pollution Abatement Advisory Committee).

KCIW met with a focus group consisting of representatives from local biotechnology industries and consultants. The purpose of the meeting was to discuss the biotechnology industry, focusing on the activities, processes, and operations that the participants expected would generate industrial and hazardous wastes that biotechnology industries might discharge to the sewer.

With the help of the focus group, KCIW developed a list of biotechnology companies within its collection system and sent them a questionnaire.

Using information gathered from the returned questionnaires, KCIW has been conducting inspections at a number of biotechnology companies to learn more about their specific activities, operations and waste streams that they discharge to the sewer.

Using the information learned from the focus group meeting, questionnaires and inspections KCIW is now beginning the process of developing permitting guidelines for the biotechnology industry.

Next steps:

KCIW will develop proposed permitting guidelines for the biotechnology industry.

KCIW will present draft guidelines to the biotechnology focus group, Industrial Waste Advisory Committee (IWAC) and the H.E.L.P. Group and ask for comments.

KCIW will implement guidelines by June 2006.

For further information about this project call Arnaud Girard, KCIW Compliance Investigator at 206-263-3012 or email: arnaud.girard@metrokc.gov.

November 2 IWAC meeting highlights

With the goal of protecting the environment, public health, biosolids quality and King County's regional sewerage system, KCIW's Industrial Waste Advisory Committee (IWAC) meets to exchange ideas among representatives of industrial wastewater dischargers, sewer agencies, environmental groups, and KCIW staff.

Announcements

Dana West, KCIW communications specialist, announced that KCIW is using a new ad layout for publishing names of companies or agencies that violate discharge regulations. Changes include: abbreviated listings of companies with fines for reporting violations; non-significant



industrial users need not be published with a late report unless significant environmental damage, and the new ad layout size is reduced, saving costs.

Barbara Badger, KCIW compliance investigator, announced that in the next several issues of the KCIW Pretreatment Quarterly newsletter there will be a profile on each of the IWAC members.

IWAC member Heather Trim of People for Puget Sound announced several upcoming evening lectures on various environmental topics. For more information on People for Puget Sound's 2005-2006 Speaker Series go to www.pugetsound.org. For more information on the Institute for Children's Environmental Health lecture series, Our Health, Our Environment: Making the Link, go to: www.iceh.org/CHE-WAlectures.html.

There may be a short meeting held before the next regular IWAC meeting on May 3 to discuss Pretreatment Streamlining Final Rule issues.

Lower Duwamish Superfund Project: Rick Huey, a project manager with the Washington State Department of Ecology (Ecology) gave a presentation about the Lower Duwamish Waterway

(LDW) Superfund Project. The Superfund site is approximately 5.5 miles long and flows into Elliott Bay near Harbor Island. The waterway is used for commercial shipping, fishing, recreation, and as habitat for wildlife. In 2001, the U.S. Environmental Protection Agency (EPA) added the waterway to the Superfund list due to contamination in sediments on the bottom of the waterway and the potential threat posed to human health and the environment. Contaminants include polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), mercury and other metals, and phthalates. Ecology and the EPA, in cooperation with King County, the City of Seattle, the Port of Seattle, and The Boeing Company, are working to investigate and clean up contaminated sediments in the LDW. Ecology is also leading an interagency work group (Ecology, King County, City of Seattle, City of Tukwila, Port of Seattle, and the EPA) that is working toward controlling sources of pollution that may contaminate waterway sediments. For more information, please contact Rick at 425-649-7256 or e-mail rhue461@ecy.wa.gov.

Phthalate Presentation: Elsie Hulsizer, KCIW program manager, and Heather Trim, People for Puget Sound staff and IWAC member, gave a presentation on phthalates, a group of chemicals used in many industrial, commercial, medical, and home and beauty products. Phthalates reside as a sort of lubricant between the molecules of plastic, allowing those molecules to slide by each other, and thus flex. Two phthalates are chemicals of concern in the sediments in the Lower Duwamish Waterway Superfund site because of their toxicity to bottom-dwelling animals. Phthalates have also been linked to human health problems. Exposure to humans is primarily through personal care products. Many studies are being conducted. Early findings have linked phthalates to reproductive system changes in baby boys and possibly to breast cancer in women. The challenge going forward is to raise awareness of this little known chemical. Educational efforts are focusing on human health problems and personal care products as a means of raising awareness. For more information, contact Elsie at 206-263-3010 or e-mail: elsie.hulsizer@metrokc.gov, or Heather at 206-382-7007 or e-mail: htrim@pugetsound.org.

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(IWAC meeting continued from page 6)

Lower Duwamish Source Control – Passive Deposition (Rain) Sampling: Bruce Tiffany, KCIW water quality staff engineer, gave a presentation about the Passive Deposition Sampling project that he and other KCIW staff have been working on. This sampling study is being conducted to test atmospheric deposition as a source of contamination in the LDW. Preliminary results have shown generally higher levels of air deposition in the Duwamish Valley than on Beacon Hill. Also, Duwamish Valley stations had higher PAHs and phthalates in winter than in spring. Sampling under this study will continue. For more information, contact Bruce at 206-263-3011 or e-mail: bruce.tiffany@metrokc.gov.

The next regular meeting will be held May 3, 2006. Agenda and meeting location to be announced.

(KCIW continued from page 1)

inspectors to conduct, by mid-year: 912 business; 636 full on-site and 276 screening inspections.

King County treatment plants produced a total of 27,310 dry tons of biosolids in 2005. Biosolids metal concentrations continued to meet the strictest EPA standards for recycling in land application projects. The county recycled 100 percent of this beneficial material through a variety of markets.

County treatment plants did not have any NPDES exceptions for effluent discharges in 2005. Thanks to all companies and facilities helping protect public health and the environment!

For more information contact Doug Hilderbrand, 206-263-3032 or e-mail: douglas.hilderbrand@metrokc.gov

Help celebrate 40 years of clean water!



The West Point Treatment Plant started treating wastewater in 1966 - 40 years ago. Please join King County Executive Ron Sims, King County Council Chair Larry Phillips, Jim Ellis and other citizen activists, business partners, Magnolia neighbors, and treatment plant staff to celebrate this historical milestone. An open house will take place at the West Point Treatment Plant, in Seattle's Discovery Park on Saturday April 22nd from 10 a.m. to 2 p.m. The event will include an award ceremony; tours; displays and refreshments. Reasonable accommodations available upon request.

For more information, contact Jo Sullivan at 206-296-8361 or TTY 711. Watch the News page of KCIW's Internet pages (address on page 1) for more information as the event date approaches. Visit the county's Internet page "1965 to 2005 - 40 Years of Clean Water" at: <http://dnr.metrokc.gov/wtd/homepage/40yrs.htm>.

Publication of recent enforcement actions

King County's Industrial Waste Program is responsible for making sure that water used by county industries returns to our waterways clean and safe. This protects our water resources, our public health, workers at treatment plants, and the biosolids produced there.

Most businesses in King County do an excellent job of meeting this clean water goal by treating their industrial wastewater before they discharge it to the sewer. Whenever possible, we work to provide technical assistance and help industries reach compliance before enforcement actions become necessary. If companies violate clean water standards, however, we do take enforcement actions, as federal regulations require.

During the period covered by this report, December 2005 to February 2006, there were no facilities that had violations warranting publication. However, the King County Industrial Waste Program acted on eight other violations at seven companies for the following pollutants and/or parameters: cadmium (1); copper (1); nickel (1); pH-acidic (2); unauthorized discharge (1), and zinc (1).

We all need to work together to prevent pollution. If you have information for the Industrial Waste Program or questions about our programs, please call 206-263-3032 or 711, TTY Relay Service. You may also visit our program's pages at <http://dnr.metrokc.gov/wlr/indwaste.htm>.



Wastewater Treatment Division
Industrial Waste Program
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658

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King County's Wastewater Treatment Division protects public health and water quality by serving 17 cities, 17 sewer districts and more than 1.4 million residents in King, Snohomish and Pierce counties. The regional public utility has been preventing water pollution for nearly 40 years.



**Join us to celebrate the 40th anniversary celebration
of King County's West Point Treatment Plant
Saturday, April 22nd, 10 a.m. to 2 p.m.**

See page 7 for more information.

<http://dnr.metrokc.gov/wtd/homepage/40yrs.htm>

Creating Resources from Wastewater